

A periodical record of entomological investigation published at the Department of Entomology,
University of Alberta, Edmonton, Alberta.

Volume 15

Number 3

July 1979

CONTENTS

Guest Editorial.....	295
Kuster – Comparative structure of compound eyes of Cicindelidae and Carabidae (Coleoptera): Evolution of scotopy and photopy.....	297
Wong – Insect damage to old oak beams at Lower Fort Garry, Manitoba	335
Shorthouse – Observations on the snow scorpionfly <i>Boreus brumalis</i> Fitch (Boreidae: Mecoptera) in Sudbury, Ontario.....	341
Straneo – Notes about classification of the South American Pterostichini with a key for determination of subtribes, genera and subgenera (Coleoptera: Carabidae)	345
Kurtak – Food of black fly larvae (Diptera: Simuliidae): seasonal changes in gut contents and suspended material at several sites in a single watershed	357

Guest Editorial – New Tools in Publishing

Although the acting editor of *Quaestiones Entomologicae* announced in his editorial “To compute or not compute” (*Quaestiones Entomologicae* Vol. 15(1): 119) that *Quaestiones Entomologicae* is now produced by the computer, you may not be aware that techniques used to produce this journal are among the more innovative in the publishing industry. Since *Quaestiones Entomologicae* was the first periodical at The University of Alberta to change to the new system, I would like to give an explanation of what is involved.

The traditional approach to publishing is fairly costly, due to the number of times a document must be typed. A manuscript, for example, may be typed several times before the author is satisfied. Reviewers may suggest further changes; and then it must be typed again for submission to a journal.

Once the manuscript is received by the publisher, the cycle starts over again. Although *Quaestiones Entomologicae* had previously been prepared by a typewriter which produced high quality copy, it was not much ‘smarter’ than the average typewriter. The manuscript was typed, page numbers applied, and then it was returned to the author to be proofread. At this point, further changes or corrections had to be cut and pasted onto the pages. Resulting changes to page make-up often entailed extensive revisions.

Clearly, the possibility for error increased each time a document was reworked. This meant that proofreading was necessary at each stage, making the entire job quite tedious.

The decision to turn to the computer is often prompted by the rumor that ‘the computer does it automatically’. Anyone who is apprehensive about this statement should be — the amount of time and effort required to make a system ‘automatic’ can be considerable. However, the ultimate benefit lies in the computer’s power to eliminate repetitive tasks. For a manuscript, entire pages need not be retyped to accommodate extra words or editorial changes and repositioning of each page is under program control.

A text formatting program reads material that has been entered into the computer from terminals or magnetic tape. Instructions are inserted in the text to tell the program when to begin new paragraphs, italicize text, or store words for the index. The program decides how much text will fit on a line, and begins a new page automatically whenever the current one is full. Page numbers and running titles also appear without prompting. As the program prepares the pages, it collects entries for the index, along with current page number. When the entire manuscript has been processed by the program, index entries are sorted alphabetically and printed.

If text is subsequently altered or edited, lines or paragraphs may fall on a different page. The program repositions the text, and makes necessary changes in the index. This means that once text is in the computer, it never needs to be entirely retyped. Corrections or additions are made where necessary; the program makes necessary adjustments to the format of pages.

In a journal such as *Quaestiones Entomologicae*, one of the greatest benefits is the automatic indexing. At the end of the year, when the entire volume has been entered into the computer, the index will be complete. The program will process all the manuscripts as one, and compile a comprehensive index.

Quaestiones Entomologicae is prepared using the TEXTFORM® program, which was implemented by a group in the Department of Computing Services at the University of Alberta. In 1975, when plans for TEXTFORM began, several text formatting programs were already available. Most, however, seemed inflexible, or were tailored specifically for typesetting. TEXTFORM was designed to format documents on a variety of devices, without changes to the instructions used in the text. Documents ranging from short reports to large scholarly texts are now produced on computer printers, plotting devices, and phototypesetters. The computing and typesetting experience of the users varies from novice to sophisticated.

As an author, you may feel that the new procedures will have little effect on you. However, you can be of assistance if you are near a computing centre and are able to supply to *Quaestiones Entomologicae* your manuscript in machine-readable form on a magnetic tape, rather than typed in the conventional manner. As long as the tape is 9-track, containing alphanumeric data coded in EBCDIC or ASCII, or a 7-track tape coded in BCD, it can be read at this computing centre. Be sure to indicate "DO NOT X-RAY" on the outside of the package, if you send a magnetic tape through the mail.

Further developments may also affect the traditional publishing process. Technology is now available to allow computers in Canada, the United States, and eventually other countries throughout the world, to communicate via telephone lines. If you are near a computing centre which is taking part in these developments, you may be able to access the computer at this university to check the final copy of your manuscript, rather than waiting for it to be sent through the mail.

Procedures in the publishing industry have been relatively constant in the past several hundred years. Changes are now taking place which will have a dramatic effect on information sharing. From seemingly remote locations, we may be able to browse through publications housed in other centres.

When the decision was made, converting to the computer may have been a drastic step for *Quaestiones Entomologicae*. However, if present publishing trends continue (as they undoubtedly will) the recent change at *Quaestiones Entomologicae* will not be the last.

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